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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,650	09/23/2005	Gary D Spinks	930058-2003	7112

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EXAMINER

SYKES, ALTREV C

ART UNIT	PAPER NUMBER
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1786

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,650	Applicant(s) SPINKS, GARY D	
	Examiner ALTREV C. SYKES	Art Unit 1786	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39, 41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) 18-38 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 39 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20100301</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment to the claims filed March 1, 2010 is acknowledged by examiner and has been entered. Claims 1, 39, and 41 have been amended and claim 40 cancelled.

Response to Arguments

2. Applicant's arguments with respect to claims 1-17, 39 and 41 have been considered but are moot in view of the new ground(s) of rejection. Examiner notes that applicant has amended the independent claims to recite that the security fiber is made of paper. As such, the arguments presented by applicant are directed to a limitation not previously made of record. The limitation will be addressed in the modified rejections below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 1, 2, 4, 7-9, 12, 13, 15, 17, 39 and 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurrle et al. (US 6,054,021) in view of Boehm (US 4,897,300)

Regarding claims 1, 17, 39 and 41 Kurrle et al. discloses an authenticatable paper product prepared by adding papermaking furnish fibers treated with a fluorescent whitening agent (FWA). (See Abstract) Kurrle et al. discloses such fibers when incorporated in a paper may be detected under long wave ultraviolet (UV) radiation. (See Col 3, lines 1-5) Kurrle et al. discloses incorporation of the FWA treated fiber sin the papermaking furnish has no impact whatsoever on the papermaking process including drying and coating. (See Col 3, lines 15-20) Kurrle et al. further discloses in the examples that the FWA was added to the fiber slurry to produce sheets. The treated fibers could not be seen in daylight, but were readily detected under UV radiation. (See Col 4, lines 51-60) Kurrle et al. does not specifically disclose that the fibers are printed on the front and rear side with a plurality of colored regions.

Boehm discloses a security thread provided with luminescent colors that are invisible in normal lighting and are provided along the security thread in successive and overlapping portions which, when the colors are excited, have a length recognizable to the naked eye and, each printed with different luminescent colors. (See Col 1, lines 4-7 and 52-58)

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Boehm discloses in UV light, the formerly colorless, inconspicuous security thread suddenly acquires an intensely colorful effect. (See Col 2, lines 25-30 and 44-47) Boehm discloses it is possible to print on individual threads. (See Col 4, lines 56-59) Additionally, Boehm discloses if an opaque carrier material is used, one must make sure the security thread has constant orientation in the paper if the fluorescent effects are to appear on the same side in all security papers; otherwise the carrier material must be printed on both sides. (See Col 5, lines 13-19) While it is noted that Boehm does not explicitly disclose a fiber, it is well known and understood in the art that threads are made from fibers. Therefore, one of ordinary skill in the art would have expected that the fibers of the thread of Boehm would also exhibit printed regions on their front and rear sides wherein the regions would be colored and visible only under ultraviolet light. Therefore, examiner notes that Boehm discloses a plurality of regions having printing visible on front and rear sides of said fibre, wherein said regions are coloured and the colours are visible only under ultra-violet light. (See Col 3, lines 60-67)

As Kurrle et al. and Boehm et al. are both directed to security documents comprising fibers that illuminate only under UV light, the art is analogous. As such, examiner equates the paper fibers of Kurrle et al. treated with a fluorescent whitening agent to an opaque carrier material as taught by Boehm. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to print the paper fibers of Kurrle in the manner taught by Boehm motivated by the desire to increase the difficulty

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in counterfeiting the security document since such is the concern of both Kurrle and Boehm. (See Kurrle Col 1, lines 12-15 and Boehm Col 2, lines 10-12)

Regarding claim 2 Boehm discloses said regions are striped regions and said striped regions include two or more differently coloured striped regions. (See Figure 1, Col 3, lines 49-56 and Col 4, lines 55-60)

Regarding claim 4 Boehm discloses the coloured striped regions appear in the same order in a repeating pattern. (See Col 3, line 49-56)

Regarding claim 7 Boehm discloses said striped regions include three or more differently coloured striped regions. (See Figure 1 and Col 3, lines 29-38)

Regarding claims 8, 9, 12 regarding the limitation that the regions are arranged in a pseudo-random pattern, examiner notes that Boehm discloses one can select the succession of the colors in particular so as to produce the order of colors in the natural spectrum, resulting in a kind of rainbow effect. (See Col 2, lines 4-7) Boehm et al. also discloses an expert has no insurmountable difficulties in putting together the colors, provided he is equipped with sufficient printing means and knowledge. (See Col 4, lines 18-19) Therefore, it would have been well within the skill of one of ordinary skill in the art at the time of the invention to modify the number of colored regions of the printed

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fiber as well as the length of each region in order to produce a fiber of sufficient counterfeit difficulty.

Regarding claim 13 Boehm discloses if an opaque carrier material is used, one must make sure the security thread has constant orientation in the paper if the fluorescent effects are to appear on the same side in all security papers; otherwise the carrier material must be printed on both sides. (See Col 5, lines 13-19)

Regarding claim 15 Boehm discloses the fibre is cut from a larger fibre. (See Col 4, lines 56-60)

6. Claims 3-6, 10, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurrle et al. (US 6,054,021) in view of Boehm (US 4,897,300) as applied to claim 1 above, in view of Kaule et al. (US 4,756, 557).

Regarding claim 14 examiner maintains the position as set forth above. Boehm further discloses one can select the succession of the colors in particular so as to produce the order of colors in the natural spectrum. (See Col 2, lines 4-7) However, the reference does not disclose said fibre comprises regions of color which do not overlap.

Kaule et al. discloses a security document having a security thread embedded in the interior of the document. (See Col 1, lines 8-14) Kaule et al. discloses in a preferred

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embodiment, at least three stripes extending lengthwise on the thread and arranged exactly parallel to each other, which differ in terms of their physical behavior, for example their color, their fluorescent or their magnetic properties. (See Col 2, lines 35-40) Kaule et al. discloses they are arranged in a clearly and precisely defined correlation with one another in longitudinally parallel areas which are sharply delimited from one another. (See Col 4, lines 58-61 and Figure 2)

As Kurrle and Kaule et al. are both directed to security threads having UV luminescence, the art is analogous. Therefore, one of ordinary skill in the art at the time of the invention would have been easily motivated by expected success to utilize the regions specifically as taught by Kaule et al. which do not include overlapping regions with the desire to tailor the fiber with explicit test criterion for authenticity. (See Col 2, lines 50-64)

Further regarding claim 3 modified Boehm fails to teach said striped regions are placed at about 1 mm gradations. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the region distances since it has been held that, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The burden is upon the Applicant to demonstrate that the claimed region distances is critical and has unexpected results. In the present invention, one would have been motivated to optimize the striped region distances motivated by the desire to use the measurement of the width of the

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individual areas and the distances there between as another test criterion for the authenticity of the security threads. (See Kaule et al. Col 2, lines 50-64)

Regarding claim 4 modified Kurrle discloses the coloured striped regions appear in the same order in a repeating pattern. (See Figure 4b and Col 5, lines 47-65)

Regarding claims 5 and 10 Kaule discloses only two striped regions, wherein the first striped region having a first colour and the second striped region having a second colour. (See Figure 4a and Col 5, lines 43-46)

Regarding claims 6 and 11 modified Kurrle discloses each of said striped regions covers half of said fibre. (See Col 4, lines 62-65 and Figure 4a)

Regarding claim 14 modified Kurrle discloses the regions abut one another with no overlap of colour at the boundaries of the regions. (See Col 4, lines 58-61)

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurrle et al. (US 6,054,021) in view of Boehm (US 4,897,300) as set forth above and further in view of Haslop (US 5,447,335)

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Regarding claim 16 Kurrle et al. discloses the treated fibers remain detectable whether the substrate is coated on one side or both sides. (See Col 3, lines 19-21) Kurrle does not specifically disclose a varnish.

Haslop discloses authenticable items such as security documents having a varnish layer applied. The varnish layer allows a higher level of durability and tamper resistance to be achieved. (See Col 1, lines 5-10 and Col 7, lines 8-13)

As modified Kurrle et al. and Haslop are both directed to authenticable items such as security documents, the art is analogous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a varnish layer as taught by Haslop for the fibers of modified Kurrle motivated by the desire to provide a higher level of durability and tamper resistance to be achieved. (See Col 7, lines 8-13)

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schrell et al. (US 5,770,110) discloses luminescent cellulose fibers. (See Col 1, lines 1-2) .
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALTREV C. SYKES whose telephone number is (571)270-3162. The examiner can normally be reached on Monday-Thursday, 8AM-5PM EST, alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1786

/ACS/
Examiner
5/19/10